

What is claimed is:

1. A substrate treating method wherein a substrate coated with a film including a material of high dielectric constant is
5 treated with a treating solution containing sulfuric acid (H_2SO_4) and hydrofluoric acid (HF).
2. A substrate treating method as defined in claim 1,
wherein said substrate is coated with a film including the
10 material of high dielectric constant and silicon thermal oxidation film, and said treating solution contains at most 1% by weight of hydrofluoric acid (HF).
3. A substrate treating method as defined in claim 1,
15 wherein said material of high dielectric constant is an oxide including at least one of aluminum Al, hafnium Hf and zirconium Zr, silicate, or aluminate.
4. A substrate treating method as defined in claim 1,
20 wherein said substrate is treated with said treating solution heated.
5. A substrate treating method as defined in claim 4,
wherein said treating solution is in a temperature range
25 between room temperature and 100°C.

6. A substrate treating method wherein a substrate coated with a film including a material of high dielectric constant is treated with a treating solution containing sulfuric acid (H_2SO_4) and buffered hydrofluoric acid ($\text{NH}_4\text{F} \cdot \text{HF}$).
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7. A substrate treating method as defined in claim 6, wherein said substrate is coated with a film including the material of high dielectric constant and silicon thermal oxidation film, and said treating solution contains at most
- 10 1% by weight of buffered hydrofluoric acid ($\text{NH}_4\text{F} \cdot \text{HF}$).
8. A substrate treating method as defined in claim 6, wherein said material of high dielectric constant is an oxide including at least one of aluminum Al, hafnium Hf and zirconium Zr, silicate, or aluminate.
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9. A substrate treating method as defined in claim 6, wherein said substrate is treated with said treating solution heated.
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10. A substrate treating method as defined in claim 9, wherein said treating solution is in a temperature range between room temperature and 100°C .
- 25 11. A substrate treating apparatus for treating a substrate

coated with a film including a material of high dielectric constant, said apparatus comprising:

a treating unit for receiving said substrate for treatment;

5 treating solution supply means for supplying a treating solution containing sulfuric acid (H_2SO_4) and hydrofluoric acid (HF) into said treating unit; and

heating means for heating said treating solution.

10 12. A substrate treating apparatus as defined in claim 11, wherein said treating solution supply means is arranged to supply said treating solution containing at most 1% by weight of hydrofluoric acid (HF).

15 13. A substrate treating apparatus as defined in claim 11, wherein said heating means is arranged to heat said treating solution to be in a temperature range between room temperature and 100°C.

20 14. A substrate treating apparatus for treating a substrate coated with a film including a material of high dielectric constant, said apparatus comprising:

a treating unit for receiving said substrate for treatment;

25 treating solution supply means for supplying a treat-

ing solution containing sulfuric acid (H_2SO_4) and buffered hydrofluoric acid ($\text{NH}_4\text{F} \cdot \text{HF}$) into said treating unit; and heating means for heating said treating solution.

5 15. A substrate treating apparatus as defined in claim 14, wherein said treating solution supply means is arranged to supply said treating solution containing at most 1% by weight of buffered hydrofluoric acid ($\text{NH}_4\text{F} \cdot \text{HF}$).

10 16. A substrate treating apparatus as defined in claim 14, wherein said heating means is arranged to heat said treating solution to be in a temperature range between room temperature and 100°C .